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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/549,342

02/05/2007

Leonid Kalika

340158009US1

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03/11/2009

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EXAMINER

NG, CHRISTINE Y

ART UNIT

PAPER NUMBER

2416

MAIL DATE

DELIVERY MODE

03/11/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/549,342	<b>Applicant(s)</b> KALIKA ET AL.	
	<b>Examiner</b> CHRISTINE NG	<b>Art Unit</b> 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 28-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 28-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/7/09</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5, 28, 32, 33 and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Publication No. 2002/0191573 to Whitehill et al.

Referring to claims 1, 28 and 33, Whitehill et al disclose an apparatus (Figure 2, access points 106 or wireless routers 107) for wirelessly communicating with at least one mobile unit (Figure 2, mobile nodes 102) within a wireless local area network, wherein the wireless local area network communicates with an external, wired, computer network (Figure 2, network 104). Refer to Section 0028. The apparatus comprises:

A base module (Figure 4, physical layer 12) positioned within a stack (Figure 4), wherein the stack forms a node (Figure 2, access points 206 or wireless routers 107) within the wireless local area network. Refer to Section 0033, lines 1-7.

An antenna module (Figure 2, antenna 110) positioned within the stack. Refer to Section 0029, lines 1-7.

At least a first wireless module (Figure 4, Neighbor Discovery NBR 34) positioned within the stack and coupled to the base and antenna modules.

Wherein at least the first wireless module is configured to perform automatic self-discovery, wherein performing automatic self-discovery includes:

Automatically determining a position of the wireless module within the stack. NBR 34 functions within the stack to perform infrastructure discovery and neighborhood size maintenance. Since NBR 34 works with other layers in the stack such as the ATP 32 layer next to it and the AHR 38 layer above it, NBR 34 must know its position within the stack in order to receive information from adjacent layers. Refer to Sections 0065, 0066, 0070 and 0083.

Automatically identifying other modules in the stack. NBR 34 works with other modules in the stack such as ATP 32 and AHR 38. Refer to Sections 0065, 0066, 0070 and 0083.

Automatically determining whether the node is coupled to communicate with the external, wired, computer network via a wired or wireless communication link. NBR 34 determines whether the node is an access point 106 for a wired connection to network 104 or a wireless router 107 for a wireless connection to network 104. Refer to Sections 0018 and 0067.

Referring to claims 5, 32 and 37, Whitehill et al disclose wherein performing automatic self-discovery includes automatically determining whether the apparatus is an access point (Figure 2, access point 107) or a backhaul (Figure 2, wireless router 107) for the wireless local area network, and wherein determining whether the node is

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coupled to communicate with the computer network includes determining whether a network address was received via a wired or wireless connection. Using the source/destination addresses of connectivity information, NBR 34 determines whether the node is an access point 106 for a wired connection to network 104 or a wireless router 107 for a wireless connection to network 104. Refer to Sections 0018, 0066 and 0067.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 29 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over anticipated by U.S. Publication No. 2002/0191573 to Whitehill et al in view of U.S. Patent No. 7,009,966 to Borchering.

Whitehill et al disclose wherein the first wireless module periodically performs automatic self-discovery (sending out beacons at a slow rate; Section 0065, lines 5-12); and wherein determining whether the node is coupled to communicate with the computer network includes determining whether DHCP (Sections 0009 and 0083) was received wirelessly or via a wired connection. NBR 34 determines whether the node is an access point 106 for a wired connection to network 104 or a wireless router 107 for a wireless connection to network 104. Refer to Sections 0018 and 0067.

Whitehill et al do not disclose a wired *Ethernet* connection.

Borchering discloses a MAC layer that performs self-discovery and uses Ethernet protocols. The Ethernet protocol provides a range of interface speeds such as 10-MBit, 100-Mbit and 1-Gbit speeds at cheaper costs than SONET/SDH, PDH and ATM protocols. Refer to Column 7, lines 23-58. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a wired *Ethernet* connection. One would have been motivated to do so since Ethernet is more cost-efficient than other protocols and operates at a range of high speeds.

5. Claims 3, 30 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over anticipated by U.S. Publication No. 2002/0191573 to Whitehill et al in view of U.S. Publication No. 2003/0123457 to Koppol.

Whitehill et al disclose wherein the first wireless module includes a finite state machine to perform automatic self-discovery.

Koppol discloses in Figures 3 and 4 finite state machines that are used by nodes during the neighbor discovery process. Refer to Sections 0034, 0038, 0042, 0043 and 0060. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein the first wireless module includes a finite state machine to perform automatic self-discovery. One would have been motivated to do so so that nodes can perform the discovery method according to steps in a state diagram.

6. Claims 4, 31 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over anticipated by U.S. Publication No. 2002/0191573 to Whitehill et al in view of U.S. Patent No. 7,106,816 to Filipovic.

Whitehill et al do not disclose a second wireless module positioned within the stack and coupled to the base and antenna modules, wherein the second module is configured to perform automatic self-discovery, and wherein the first and second wireless modules each implement a different IEEE 802-type wireless protocol.

Filipovic discloses in Figures 3A-3C a wireless device that is configured to support different IEEE 802 wireless protocols of 802.11a, 802.11b and 802.11g. Each protocol is self discovered since control unit 24B automatically configures the wireless device for communication according to 802.11a, 802.11b or 802.11g upon identifying that an 802.11a, 802.11b or 802.11g has been received, respectively. Refer to Column 7, line 8 to Column 9, line 56. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a second wireless module positioned within the stack and coupled to the base and antenna modules, wherein the second module is configured to perform automatic self-discovery, and wherein the first and second wireless modules each implement a different IEEE 802-type wireless protocol.. One would have been motivated to do so to make the node more flexible by supporting other protocols.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINE NG whose telephone number is (571)272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/  
Supervisory Patent Examiner, Art  
Unit 2416

C. Ng  
March 2, 2009